



Air Permits 201: Understanding the Details

**Louisiana Department of Environmental Quality
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Air Permits

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LDEQ's Role and EPA



EPA provides oversight of LDEQ's air quality program.

LDEQ is federally authorized to administer the federal Part 70 (Title V) and New Source Review (NSR) programs.



Air Permits Role



- Issue air permits
 - Shows all applicable operations limits
 - Basis for Surveillance Division's inspections
 - Basis for Enforcement Division's work
- Issue other permitting actions
 - Variances
 - Exemptions





Air Permits Role

- Provide technical guidance for permit applications
 - Industry
 - Community
- Work with public and community on permitting activities
 - Public comments
 - Public hearings





DETAILS OF AIR PERMITS





The Air Permit

The final permit usually contains:

- A description of the facility
- Specific enforceable standards that apply
- Specific limits that apply
- Specific monitoring and recordkeeping requirements
- Specific reporting requirements



Air Permit Application



Download the detailed guidance from LDEQ website:

http://www.deq.louisiana.gov/portal/Portals/0/permits/air/r05_Louisiana%20Guidance%20for%20Air%20Permitting%20Actions.zip

Every consultant needs to read this document from the front to the back. This is not the application set of instructions.





WHERE DO WE START





Step I

The key to submitting the best application is to **read the regulations**, **read the regulations** and **read the regulations**.

The applicant by law is required to be in compliance with all rules and regulations, regardless of whether they are included in the issued permit or not. Therefore, it is in the applicant's best interest to familiarize themselves with the Clean Air Act and all other associated regulations.





The First reading of the Regulations

- The first reading of the regulations should focus on grasping a basic concept of the types of equipment that would be considered a source of contaminants.
- Once an applicant has made a general determination of applicability, then a detailed, piece of equipment by piece of equipment survey at the facility should be conducted. The focus should be for the types of pollutants and the means by which the pollutants enter the atmosphere.
- Many sources have a specific stack or vent from which exhaust or waste gases are emitted. Other sources have flanges, packing or other connections that would normally be considered leak free, but extensive surveys by industry and EPA has determined that a certain percentage normally have small leaks that must be considered and accounted for.





The First reading of the Regulations

- All combustion sources will have incomplete combustion and usually carry some amount of contaminants (non fuel products) which are exhausted from the stack.
- Once every potential source has been identified, then the applicant shall make a determination as to which category that source shall be placed.
 - insignificant activity
 - permitted source
- To make that determination the applicant must determine the level of emissions and the type of pollutant that is being emitted.



The First reading of the Regulations

The most common sources of information are as follows.

1. Best Engineering Judgment
2. AP-42
3. Technical documentation
4. Mass Balance calculations
- ❖ Which are dependent on a chemical analysis of the constituents contained in the product which is being affected.
 - Either a determination of the amount of contaminant contained in the raw material being introduced into the chemical process and the assumption that all of that contaminant is being emitted into the air; or
 - A determination of the amount of the contaminant in the raw material and another determination of the amount in the finished product. The differential is assumed to be emitted to the air.
5. Manufacturer's testing
6. Stack testing performed by the applicant
7. CEMS or COMS, or other continuous monitoring system.

The Second reading of the Regulations

The second reading of the regulations should now focus on each specific emission source that will be permitted.

- Focus on emission limitation regulations
 - NSPS's and NESHAP's - list all regulations that were examined
 - the applicant shall list by specific citation from the regulation
 - ✓ Allowed exemptions, or
 - ✓ Applicable requirements
- which compliance option is being followed with its citation reference
- Fugitive emission regulations (Exact count or seal type, etc.)

The Second reading of the Regulations

- Once the applicant has completed the analysis of emission rates from normal operations, the applicant should examine all modes of operations that are not standard, or typical. The applicant should focus on:
- Start-up and Shutdown operations
 - Is the Start-up and Shutdown a once in a while situation or
 - Is the operation a Batch process or Power Plant that Load follows and is therefore part of normal operations?
- Alternate fuels
- Changes to the process product or storage product
- Plant flexibility of operations issues
- Cleaning operations
- Operations that occur during planned periodic maintenance repair outages

The Third reading of the Regulations

- The third reading of the Regulations should focus on those regulations that affect the entire facility or those that are related to limiting emission increases, such as PSD and NNSR.
- For this review, the applicant must carefully examine the historical record of the permitting history and the potential to be affected by the regulations that limit emission increases over time.
- One key item is that what was once not considered to have been a pollutant emitter may now have been determined to emit pollutants. Example Cooling Towers built in the 1980's.

Sample NSPS Regulation



Nitric Acid Plant Absorber Stack

[40 CFR 60.72(a)(1)] Nitrogen oxides ≤ 3 lb/ton (1.5 kg/metric ton) of acid produced, the production being expressed as 100% nitric acid. Subpart G. [40 CFR 60.72(a)(1)] **(Limitation)**

[40 CFR 60.72(a)(2)] Opacity ≤ 10 percent. Subpart G. [40 CFR 60.72(a)(2)] Which Months: All Year Statistical Basis: None specified

[40 CFR 60.73(a)] Nitrogen oxides **monitored** by CMS continuously. Subpart G. [40 CFR 60.73(a)] Which Months: All Year Statistical Basis: None specified

[40 CFR 60.73(a)] Nitrogen oxides **recordkeeping** by CMS continuously. Subpart G. [40 CFR 60.73(a)]

[40 CFR 60.73(b)] Establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). Subpart G. [40 CFR 60.73(b)]





Permit Types – Minor Source

Nitric Acid Plant Absorber Stack (Cont.)

[40 CFR 60.73(c)] Production rate **recordkeeping** by electronic or hard copy daily. Record the daily production rate and hours of operation. Subpart G. [40 CFR 60.73(c)]

[40 CFR 60.74(a)] Use as reference methods and procedures the test methods in 40 CFR 60 Appendix A or other methods and procedures as specified in 40 CFR 60.74, except as provided in 40 CFR 60.8(b), in conducting the performance tests required in 40 CFR 60.8. Subpart G.

[40 CFR 60.74(b)] Determine compliance with the NO_x standards in 40 CFR 60.72 using the test methods and procedures specified in 40 CFR 60.74(b)(1) through (b)(4), or (c)(1), as applicable. Subpart G.

[40 CFR 60.74(d)] Use the procedure in 40 CFR 60.73(b) to determine the conversion factor for converting the monitoring data to the units of the standard. Subpart G.



Monitoring side discussion



Source ID Source Name	Pollutant	CEMS	CPMS	CAM		Periodic Monitoring			NSR 50% Rule			
				Direct	Surrogate	Exempt			PSD	NNSR	Exempt	
Monitoring Description or Exemption reason. Specify if the monitoring is existing, or new, identify the parameters to be monitored, any frequency and any ranges. Provide the value and citations for the standard being used to qualify for Periodic Monitoring	PM ₁₀						≥ 25 tpy			≥ 7.5 tpy		
	SO ₂						≥ 40 tpy			≥ 20 tpy		
	NO _x						≥ 40 tpy			≥ 20 tpy	≥ 20 tpy	
	CO						≥ 100 tpy			≥ 50 tpy		
	Total VOC						≥ 40 tpy			≥ 20 tpy	≥ 20 tpy	
	TAP No. 1						≥ 10 tpy					
	TAP No. 2						≥ 10 tpy					
	TAP No. 3						≥ 10 tpy					



Periodic Monitoring – Dust Filter Example

[New Title V Dust Filter Training Language.docx](#)





Let's look at a regulation – Specifically the language and interpretation.

[Target Facility and LAC 33 2108.doc](#)





A Sample Permit - A small Foundry

- The General Information Report
- [TPOR0148_2093_20114_11282011.PDF](#)
- The Inventory Report
- [TPOR0149_2093_20114_11282011.PDF](#)
- The Emission Matrix Reports
- [TPOR0145_2093_20114_11282011.PDF](#)
- [TPOR0146_2093_20114_11282011.PDF](#)



A Sample Permit - A small Foundry



The Specific Requirements Report

[TPOR0147_2093_20114_11282011.PDF](#)

The Briefing Sheet (The signed permit)

[2093 Foundry Title V Permit Renewal.docx](#)

The Statement of Basis

[2093 Air Statement of Basis.docx](#)





COMMUNITY INVOLVEMENT





Community Involvement

- Submit comments during Public Notice Period
- Participate in Public Hearings
- Coordinate with environmental advocacy groups
- Contact LDEQ staff with questions



Two Types of Public Notices



- General Permit:
 - The Public needs to review the application to verify it qualifies for a General Permit
 - No set time is established – Comment immediately – or at least before Permit is issued.
- Synthetic/Major Source/PSD/NNSR Permit:
 - Public has 30 days to review the draft permit and submit comments
 - Can also include a local public hearing.



PUBLIC HEARING AND REQUEST FOR PUBLIC COMMENT

ON THE TECHNICALLY COMPLETE SOLID WASTE PERMIT RENEWAL APPLICATION, PROPOSED PART 70 AIR OPERATING PERMIT & THE ASSOCIATED ENVIRONMENTAL ASSESSMENT STATEMENT

The LDEQ, Office of Environmental Services, will conduct a public hearing to receive comments on the Technically Complete Solid Waste Permit Renewal Application, proposed Part 70 Air Operating Permit and the Associated Environmental Assessment Statement (EAS) for Waste Management of Louisiana, LLC, 29375 Woodside Drive, Walker, Louisiana 70785 for the Woodside Landfill and Recycling Center. **The facility is located at 29375 Woodside Drive, approximately two (2) miles east of the town of Walker and approximately one half mile south of the intersection of US Highway 190 and Woodside Drive, Walker, Livingston Parish, Louisiana.**

The hearing will be held on **Tuesday, March 25, 2008, beginning at 6:30 p.m., at the Livingston Parish Courthouse, Court Room #1, 20180 Iowa Street, Livingston, LA.** During the hearing, all interested persons will have an opportunity to comment on the permitting activities.

Waste Management of Louisiana, LLC requested to renew their Standard Solid Waste Permit to continue operation of their existing Type I and Type II Landfill.

Also, the company requested a revision to the Part 70 Air Operating Permit for its Woodside Landfill and Recycling Center (WLRC). WLRC is a municipal solid waste disposal facility with a design capacity of 41,410,552 cubic yards (approximately 31,600,609 cubic meters). It receives a variety of non-hazardous solid wastes (including municipal solid waste, such as residential and commercial solid waste, and industrial solid waste), which are disposed of by landfilling. A Gas Collection and Control System (GCCS) was installed in 2003 to control landfill gas emissions. Currently, the landfill is supported by a variety of operations and maintenance-related activities, including operation and maintenance of mobile equipment, non-mobile equipment powered by internal combustion engines, leachate handling, and the storage of motor fuels and lubricants. It is anticipated that the bioremediation of hydrocarbon-contaminated sludge and soils (non-hazardous) will take place at WLRC.

The proposed Part 70 air operating permit was processed as an expedited permit in accordance with LAC 33:I.Chapter 18.

Estimated emissions from the facility in tons per year are as follows:

<u>Pollutant</u>	<u>Previous Estimate</u>	<u>Updated Emission Rate</u>
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All interested persons will be afforded the opportunity to comment on the technically complete solid waste permit application, the proposed Part 70 air operating permit and the EAS.

The EAS submitted by the applicant addresses avoidance of potential and real environmental effects, balancing of social and economic benefits against environmental impact costs, and alternative sites, projects, and mitigative measures.

Written comments or written requests for notification of the final decision regarding these permitting actions may also be submitted to Ms. Soumaya Ghosn at LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. **Written comments and/or written requests for notification must be received by 12:30 p.m., Monday, April 28, 2008.** Written comments will be considered prior to a final permit decision.

LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The technically complete solid waste permit renewal application, air permit application, proposed permit, statement of basis, Worksheet for Technical Review and the EAS is available for review at the LDEQ Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at www.deq.louisiana.gov.**

Additional copies may be reviewed at the Livingston Parish President's Office, 20180 Iowa Street, Livingston, LA 70754 and the Denham Springs-Walker Branch Library, 239 Florida Avenue S.E., Denham Springs, LA 70727-1838.

Previous notices regarding different activities associated with the solid waste technically complete application have been published in The Advocate on September 22, December 6, 15 & 20, 2007 and in The Livingston Parish News on September 23, December 6, 16 & 20, 2007.

Individuals with a disability, who need an accommodation in order to participate in the public hearing, should contact Ms. Heather Manry at the above address or by phone at (225) 219-3279.

Inquiries or requests for additional information regarding these permitting actions should be directed to Sonya Eastern, LDEQ, Waste Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3551 regarding the technically complete solid waste permit application and directed to Dr. Qingming Zhang, LDEQ, Air Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3140 regarding the proposed air permit.

Permit public notices including electronic access to general information from the technically complete solid waste permit application, the proposed Part 70 air operating permit, statement of basis and EAS can be viewed at the LDEQ permits public notice webpage at www.deq.louisiana.gov/apps/pubNotice/default.asp and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx.

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at http://www.state.la.us/ldbc/listservpage/ldeq_pn_listserv.htm.

All correspondence should specify, AI Number 11767,

Permit Action	Permit Number	Activity Number
Proposed Air Permit	1740-00025-V1	PER20070001
Technically Complete Solid waste Permit Application	P-0080R1	PER20050001

**Scheduled for publication: The Advocate on February 14 & 16, 2008
Livingston Parish News on February 14 & 17, 2008**



Community Involvement

- Materials made available for review during Public Notice period:
 - Draft permit
 - Permit application and any additional information submitted
 - Statement of Basis (if required)
 - Environmental Assessment Statement (for new facilities and PSD projects)
- Materials can be viewed via:
 - Local Library
 - Electronic Document Management System (EDMS):
<http://edms.deq.louisiana.gov>





RESOURCES, DEFINITIONS, AND ACRONYMS





Resources

Louisiana Environmental Regulatory Code (LAC)

Title 33 :Part III.Air

Part I. Office of the Secretary

<http://www.deq.louisiana.gov/portal/tabid/96/Default.aspx>

The Code of Federal Regulation (CFR)

NSPS (40 CFR 60)

NESHAP (40 CFR 61)

<http://www.gpoaccess.gov/cfr/retrieve.html>

The Clean Air Act (CAA)

The Clean Air Act Amendments (CAAA)

<http://www.epa.gov/air/caa/peg/>





Resources

DEQ Website

<http://www.deq.louisiana.gov/portal/tabid/36/Default.aspx>

The Air Permitting Manual (Essential Reading)

http://www.deq.louisiana.gov/portal/Portals/0/permits/air/r05_Louisiana%20Guidance%20for%20Air%20Permitting%20Actions.zip

A weekly list of permit applications received

<http://www.deq.louisiana.gov/portal/tabid/2824/Default.aspx>

A list of permits on public notice

<http://www.deq.louisiana.gov/apps/pubNotice/default.asp>

EDMS – Can be accessed on-line

<http://www.deq.louisiana.gov/portal/tabid/2604/Default.aspx>

Public Participation Group

<http://www.deq.louisiana.gov/portal/tabid/2198/Default.aspx>





Definitions and Acronyms

•APD	Air Permits Division
•BACT	Best Achievable Control Technology
•BART	Best Available Retrofit Technology
•BMP	Best Management Practices (Plan)
•CAA	Clean Air Act
•CAAA	Clean Air Act Amendments
•CEMS	Continuous Emission Monitoring System
•CFR	Code of Federal Regulations
•CMS	Continuous Monitoring System
•CO	Carbon monoxide
•Criteria Pollutants	These are nitrogen oxide (NO _x), sulfur dioxide (SO ₂), Particulate Matter (PM), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Lead (Pb).
•DEQ	Department of Environmental Quality
•EPA	Environmental Protection Agency
•EDMS	Electronic Documents Management System : The repository for all official records created or received by the Department





Definitions and Acronyms

•HAP	Hazardous Air Pollutant
•HON	Hazardous Organic NESHAPS
•LAC	Louisiana Administrative Code
•LAER	Lowest Achievable Emission Rate
•Major Source	Facilities with emissions of criteria emissions that equal or exceed 100 tons per year (TPY) or emissions of any one federally-regulated HAP that equals or exceeds 10 TPY or if total HAP emissions for the facility equal or exceed 25 TPY. Lower emission thresholds for a criteria pollutant may apply in nonattainment areas. A facility which has emissions of one or more criteria pollutants above 100 tpy.
•MACT	Maximum Achievable Control Technology
•MER	Minimum Emission Rate
•Minor Source	Facilities with emissions of criteria emissions that are less than 100 tons per year (TPY) or emissions of any one federally-regulated HAP is less than 10 TPY or if total HAP emissions for the facility are less than 25 TPY.
•MM	Million
•MMBTU	Millions of British thermal units



Definitions and Acronyms



•NAA	Nonattainment area
•NAAQS	National Ambient Air Quality Standards
•PM2.5	Particulate Matter of 2.5 microns or less aerodynamic diameter
•PM-10	Particulate matter, 10 microns or less in size
•NESHAP	<u>N</u> ational <u>E</u> mission <u>S</u> tandards for <u>H</u> azardous <u>A</u> ir <u>P</u> ollutants
•NSPS	<u>N</u> ew <u>S</u> ource <u>P</u> erformance <u>S</u> tandards
•NSR	New Source Review
•NNSR	Non-attainment New Source Review
•Pb	Lead
•PPB	Parts per Billion
•PPM	Parts Per Million
•PSD	Prevention of Significant Deterioration
•PTE	Potential To Emit is the emissions from a facility if it is run at maximum all year long.
•SCF	Standard Cubic Foot
•SCFH	Standard Cubic Feet per Hour
•SCFM	Standard Cubic Feet per Minute



Definitions and Acronyms

•SCM	Standard Cubic Meter
•SIC	Standard Industrial Classification
•SIP	State Implementation Plan
•SO ₂	Sulfur dioxide
•SOCMI	Synthetic Organic Chemical Manufacturing Industry
•SOP	Standard Operating Procedures
•Synthetic minor source	A facility that would be major source except that the emissions are being controlled below the major source emission level. The facility is permitted as a minor source.
•Title V	Operating Permit Program authorized by Title V of the Clean Air Act
•TPY	Tons per year
•VOC	Volatile Organic Compound
•TEMPO	Tools for Environmental Management and Protection Organizations.: The Department's official database into which all data for every facility is entered.



Office & Division Contact Information

Air Permits Division
602 N. Fifth Street
Baton Rouge, LA 70802
225.219.3181

Customer Service Center
225-219-LDEQ (5337)
Toll Free 1-866-896-LDEQ (5337)
Hours 8-4:30 M-F



Speaker Contact Information



Kermit C. Wittenburg, P. E.

Environmental Chemical Specialist - Staff

225.219.3390

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